



**NOAA Teacher at Sea**  
**Lisbeth Uribe**  
**Onboard NOAA Ship DELAWARE II**  
**July 28 – August 8, 2008**

**NOAA Teacher at Sea:** Lisbeth Uribe  
**NOAA Ship:** Delaware II  
**Mission:** 2008 Surf Clam and Ocean Quahog Survey III  
**Geographical Area:** Southern New England and Georges Bank  
**Date:** Wednesday, July 30, 2008

**Science and Technology Log**

Prior to our departure on the survey, all the volunteers attended presentations by NOAA scientists about the work we would be doing. The purpose of the clam survey is to provide consistent, unbiased estimates of the relative abundance for many shellfish in the North East region. The target species for our survey are the **Atlantic Surf clams** (*Spissula solidissima*) and **Ocean Quahogs** (*Arctica islandica*). We also went to a NOAA storeroom and were outfitted with our foul weather gear (heavy waterproof boots, fluorescent yellow rain pants and rain jacket). While on board we received several briefings about safety and the expectations for behavior during the cruise. During an emergency drill we each tried on our survival suit. I keep the suit in a bag at the foot of my bed, ready for any emergency!

We set sail at 2:00 pm on Monday, the 28<sup>th</sup> of July, and headed south towards our first tow location in the Southern New England region.

The first 10 survey points or **stations** of our cruise are repeats of points surveyed in the last trip. This means we will be heading south toward the Long Island region before sailing for the Georges Bank region. We are conducting repeat surveys because after the last survey, the dredge's electrical cable was replaced with a longer cable (formerly 750 feet, now 1,100 feet long). The added length in the cable results in a voltage drop that is expected to be enough to cause the dredge pump to lose pressure slightly. The pump, attached to the dredge itself, is designed to churn up sediment and shellfish as the dredge is towed along the sea floor. By rechecking the survey data collected in the last trip, the scientists will be able to calibrate the data obtained using the new cable. The



**NOAA Teacher at Sea, Lisbeth Uribe, in her survival suit next to the dredge**

scientists and crew are very concerned about accuracy of data collection during all parts of the Clam Survey.

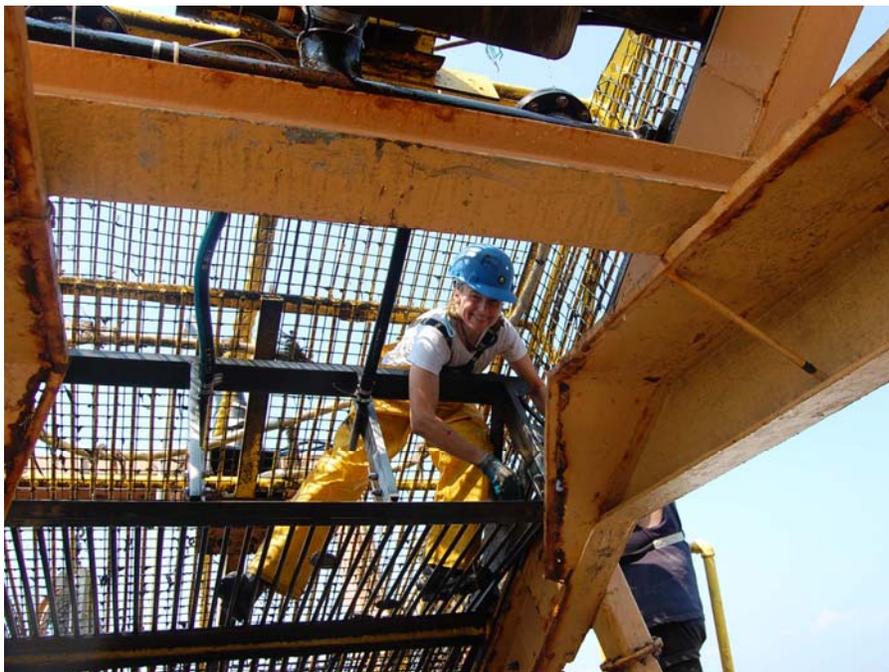
### **Problems with the Dredge**

For the first repeat survey station, our CO (Commanding Officer), Captain Wagner, warned the crew that the bottom might be rocky. Once the dredge hit the bottom and began to be towed, we heard some loud noises indicating that there were indeed rocks on the bottom. We pulled the dredge out of the water after the standard 5-minute tow time. Rocks had twisted, bent and even severed various pipes and rods that make up the cage of the dredge. The row of outlet pipes (called **nipples**) that direct powerful jets of water towards the opening of the cage had been severed at the points in which they screw into the main pump pipe.

Though the damage was a setback in terms of lost time, it was amazing to see the engineers swing into action and make the necessary repairs over the next six hours. Out of the hold came an assortment of tools, such as metal cutters, jacks, soldering equipment, wrenches, pliers, and mesh wiring. I was put to work extracting the broken ends of pipes and handing tools to the engineers as they either replaced or repaired broken parts. By the end of my work shift (midnight) the dredge was fully repaired and ready for work again.

### **Tuesday, July 29, 2008**

I am fortunate to be working with a great team on the day shift crew (noon to midnight). My Watch Chief, Shad Mahlum, and the Chief Scientist, Vic Nordahl, are excellent teachers, patient with my mistakes and quick to offer words of encouragement. There are several work assignments during each station. I help by turning on and off the power for the pump on the dredge, clearing out the shellfish that get caught in the cage, and weighing and measuring the



**I am wearing my bib and overalls, boots, and a hardhat while working inside the dredge to free the clams caught in the corners and cracks of the dredge.**

clams we catch. My favorite job is cleaning out the inside of the dredge. After the dredge has been hauled up the ramp onto the deck, the back door is released and the clams and broken shells tumble onto the sorting table. My job is to climb up inside the cage of the dredge and toss down the shells and organisms that get caught along the edges. I like the challenge of climbing around up high in a small space. We have been lucky to have very calm seas over the past couple of days. This job will get

quite a bit more challenging when the deck starts to move around more.

The dredged material is sorted into different wire baskets, also known as **bushels**, each contain either clams, other sea life or trash to be thrown back out to sea once we have moved past the survey site. The clams are weighed and measured. At some stations we also collect meat specimens for further analysis. All the information goes into the computer, including data collected by the sensors on the dredge.

### **Personal Log**

As part of the day shift crew, I work from noon until midnight. It may sound tough working a 12-hour shift, but in reality the time passes very quickly as we are always busy either preparing for a station, processing the clams, or cleaning up after a dredge. We are not permitted to return to our room until the end of our shift as our roommates are on the opposite shift and are sleeping.

When sailing out in the open water it easy to lose one's sense of direction. On the second day of the survey I knew that we were headed south for the repeat dredges, but it was not until one of the crew members showed me the site "Ship Tracker for NOAA" that I realized we were collecting samples just off the coast of Long Island all afternoon—not far from my home town, New York City! We are so busy moving from station to station that I often lose track of where I am.

I am grateful for the clear weather we have had so far on the cruise. Learning to work with the dredge and scientific equipment would have been much more difficult if the seas were not so calm. Each day brings something new and interesting to learn and experience.

Well, my shift is almost over. Time to think about eating a late night snack and then getting some rest, - lulled by the gentle rocking of the waves.

### **Question for the Day**

What is the origin of the word "Quahog"?

What is the difference between Atlantic Surf clams and Ocean Quahogs?

What is a sea mouse?